

$$x^2 - 9x = -18$$

$$\quad +18 \quad +18$$

$$x^2 - 9x + 18 = 0 \quad \underline{-6} \quad x \underline{-3} = 18$$

$$\quad \underline{-8} \quad + \quad \underline{-3} \quad = -9$$

12	→ 4
8-11	→ 3
6-7	→ 2
3-5	→ 1

$$x^2 - 6x - 3x + 18 = 0$$

$$x(x-6) - 3(x-6) = 0$$

$$(x-3)(x-6) = 0$$

$$x-3 = 0 \quad x-6 = 0$$

$$\quad +3 \quad +3 \quad \quad +6 \quad -6$$

$x = 3$	$x = 6$
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$$\text{Vertex: } \frac{9}{2(1)} = \frac{9}{2} = 4.5$$

$$4.5^2 - 9(4.5) + 18 = y$$

$$20.25 - 40.5 + 18 = -2$$

$$y = -2$$

$$\text{Vertex: } (4.5, -2)$$

